Support Document for the Revised National Priorities List Final Rule December 2000

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ABSTRACT

Pursuant to Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), the U.S. Environmental Protection Agency (EPA) periodically adds hazardous waste sites to the National Priorities List (NPL). Prior to actually listing a site, EPA proposes the site in the *Federal Register* and solicits public comments.

This document provides responses to public comments received for one site proposed on July 28, 1998 (63 FR 40247), two sites proposed on February 4, 2000 (65 FR 5468), two sites proposed on May 11, 2000 (65 FR 30489), and one site proposed on July 27, 2000 (65 FR 46131). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are added to the NPL in a final rule published in the *Federal Register* in December 2000. The rule also adds two other sites to the NPL on which no comments were received.

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EXECUTIVE SUMMARY

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original NPL was promulgated on September 8, 1983 (48 FR 40658). CERCLA also requires the EPA to update the list at least annually.

This document provides responses to public comments received for one site proposed on July 28, 1998 (63 FR 40247), two sites proposed on February 4, 2000 (65 FR 5468), two sites proposed on May 11, 2000 (65 FR 30489), and one site proposed on July 27, 2000 (65 FR 46131). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are added to the NPL in a final rule published in the *Federal Register* in December 2000. The rule also adds two other sites to the NPL on which no comments were received.

The six sites addressed in this document are listed in the following table.

SITES ADDRESSED IN THIS DOCUMENT

					HRS Score	
Region	State	Site Name	City	Proposal Date	Proposed	Final
3	MT	Naval Weapons Station Yorktown–Cheatham Annex	Yorktown	February 4, 2000	48.72	49.27
4	FL	Alaric Area Ground Water Plume	Tampa	February 4, 2000	41.91	41.91
5	IL	Indian Refinery-Texaco Lawrenceville	Lawrenceville	July 28, 1998	56.67	56.67
8	SD	Gilt Edge Mine	Lead	May 11, 2000	50.00	50.00
8	MT	Lockwood Solvent Ground Water Plume	Billings	May 11, 2000	45.69	45.69
10	OR	Portland Harbor	Portland	July 27, 2000	50.00	50.00

INTRODUCTION

This document explains the rationale for adding six sites to the NPL of uncontrolled hazardous waste sites and also provides the responses to public comments received on these sites. EPA proposed one site on July 28, 1998 (63 FR 40247), two sites proposed on February 4, 2000 (65 FR 5468), two sites proposed on May 11, 2000 (65 FR 30489), and one site proposed on July 27, 2000 (65 FR 46131). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are added to the NPL in a final rule published in the *Federal Register* in December 2000. The rule also adds two other sites to the NPL on which no comments were received.

Background of the NPL

In 1980, Congress enacted CERCLA, 42 U.S.C. Sections 9601 *et seq.* in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by SARA, Public Law No. 99-499, stat., 1613 *et seq.* To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, take into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101(23)). Remedial action tends to be long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101(24)). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS, which EPA promulgated as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS

score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites, as suggested by CERCLA. The NPL has been expanded several times since then, most recently on August 24, 2000 (65 FR 51567). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was on August 24, 2000 (65 FR 51567).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works. Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]):

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The purpose of the NPL, therefore, is primarily to serve as an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principle mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study

that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors, that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories include:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (toxicity and waste quantity); and
- people or sensitive environments (targets) affected by the release.

Under the HRS, four pathways can be scored for one or more threats:

- Ground Water Migration (S_{gw})
  - drinking water
- Surface Water Migration (S_{sw})
  These threats are evaluated for two separate migration components (overland/flood and ground water to surface water).
  - drinking water
  - human food chain
  - sensitive environments
- Soil Exposure (S_s)
  - resident population
  - nearby population
  - sensitive environments
- Air Migration (S_a)
  - population
  - sensitive environments

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100:

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous

substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

Aside from the HRS, there are two other mechanisms by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score.

The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets all three of these requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.

Organization of this Document

Each section that follows addresses site-specific public comments. The sites are arranged by EPA Region and are listed alphabetically by state and site name. Each site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq.*, also known as Superfund
EPA	U.S. Environmental Protection Agency
HRS	Hazard Ranking System, Appendix A of the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
HRS Score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List, Appendix B of the NCP
NPL-###	Public comment index numbers as recorded in the Superfund Docket in EPA Headquarters and in Regional offices
PA/SI	Preliminary Assessment/Site Inspection
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act of 1976 (U.S.C. 9601-6991, as amended)
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision, explaining the CERCLA-funded cleanup alternative(s) to be used at an NPL site
SARA	Superfund Amendments and Reauthorization Act of 1986, Public Law No. 99-499, stat., 1613 et seq.

4.2.4 Conclusion

The original HRS score for this site was 45.69. Based on the above response to comments, the score remains unchanged. The final scores for the Lockwood Solvent Ground Water Plume site are:

Ground Water:	91.38
Surface Water:	Not Scored
Soil Exposure:	Not Scored
Air:	Not Scored
HRS Score:	45.69

REGION 10

5.1 Portland Harbor, Multnomah County, Oregon

5.1.1 List of Commenters/Correspondence

NPL-U33-3-7-1-R10	Comment dated September 3, 2000 from (b) (6), Hillsboro, Oregon (private citizen)
NPL-U33-3--7-2-R10	Comment dated September 20, 2000 from Samuel N. Penny, Chairman, Nez Perce Tribal Executive Committee
NPL-U33-3-7-3-R10	Comment dated September 22, 2000 from Patricia M. Dost of Schwabe, Williamson & Wyatt, P.C., Attorneys at Law, representing Time Oil Company
NPL-U33-3-7-4-R10	Comment dated September 22, 2000 from Cheryl R. Koshuta, Corporate Environmental Manager, Port of Portland
NPL-U33-3-7-5-R10	Comment dated September 18, 2000 from Randall J. Butler, Colonel, U.S. Army Corps of Engineers
NPL-U33-3-7-6-R10	Comment dated September 25, 2000 from Robert A. Brunoe, General Manager, Department of Natural Resources, The Confederated Tribes of the Warm Springs Reservation of Oregon
NPL-U33-3-7-7-R10	Comment dated September 25.2000 from Michael Farrow, Director, Department of Natural Resources, Confederated Tribes of the Umatilla Indian Reservation
NPL-U33-3-7-8-R10	Comment dated September 25, 2000 from (b) (6), Salem, Oregon (private citizen)
NPL-U33-3-7-9-R10	Comment dated September 22, 2000 from Randy Settler, Chair, Yakama Nation Fish and Wildlife Committee, Confederated Tribes and Bands of the Yakama Indian Nation
NPL-U33-5-7-R10	Correspondence dated July 6, 2000 from John A. Kitzhaber, Governor of Oregon

5.1.2 Site Description

The Willamette River originates within Oregon in the Cascade Mountain Range and flows approximately 187 miles north to its confluence with the Columbia River. The Lower Reach of the Willamette River from River Mile (RM) 0 to approximately RM 26.5 is a wide, shallow, slow moving segment that is tidally influenced with tidal reversals occurring during low flow periods as far upstream as RM 15. The river segment between RM 3 and RM 10 is the primary depositional area of the Willamette River system. The Lower Reach has been extensively dredged to maintain a 40-foot deep navigation channel from RM 0 to RM 14. This segment of the Lower Reach contains a highly industrialized area known as Portland Harbor which contains a multitude of facilities and both private and municipal waste water outfalls. Up to 17 industrial operations have been identified as potential sources of contamination to Portland Harbor between RM 3.5 and RM 9.2; however, because potential sources of contamination to this river segment have not been thoroughly investigated, the site is being evaluated for eligibility to the National Priorities List (NPL) as contaminated sediments with no identified source.

In July 1997, the United States Army Corps of Engineers (USACE) collected surface sediment samples between RM 3.8 and RM 8.9 from Portland Harbor as part of a pre-dredging sediment quality study. Analytical results documented the presence of contaminated sediments in this river segment having elevated concentrations of arsenic, mercury, several pesticides, polychlorinated biphenyls (PCBs), and several semivolatile organic compounds (SVOCs).

In September and October 1997, consultants for the EPA conducted field work for a Site Inspection (SI) in the Lower Reach of the Willamette River within Portland Harbor. This sampling effort included the collection of bottom sediment and porewater samples from near shore areas between RM 3.5 and RM 9.2. Analytical results documented the presence of contaminated sediments in this river segment having elevated concentrations of several inorganics (i.e., metals), several SVOCs, PCBs, dichloro-diphenyl-trichloroethene (DDT), and tributyl tin (TBT).

Six federally recognized Indian tribes have identified treaty protected rights and resources that may be affected by contamination at the site. The tribes are: the Confederated Tribes of the Warm Springs Reservations; the Confederated Tribes of the Umatilla Indian Reservation; Confederated Tribes of the Grand Ronde Community; Confederated Tribes of the Siletz Reservation; Confederated Tribes and Bands of the Yakama Indian Nation; and the Nez Perce Tribe.

5.1.3 Summary of Comments/Correspondence

John A. Kitzhaber, the Governor of Oregon, wrote in support of including the Portland Harbor site on the NPL.

Samuel N. Penny of the Nez Perce Tribal Executive Committee, supported the listing decision but raised separate issues concerning EPA's "treaty and trust responsibilities," the roles and relationships between various stakeholders and PRPs in the remediation process, and cleanup levels. He expressed the hope that "a framework under Superfund [will] be developed that ensures meaningful Tribal participation and protection of Tribal interests."

Colonel Randall J. Butler of the U.S. Army Corps of Engineers (hereafter the USACE) agreed that "EPA's evaluation of sediment contamination through the Hazard Ranking System [HRS] justifies further investigation

of the site for remediation under CERCLA." He concluded, "[w]e hope to work with you in managing the NPL site so our authorities can work together for the public good."

Patricia M. Dost, representing Time Oil Company (hereafter Time Oil) commented that the Oregon Department of Environmental Quality (ODEQ) "has to date identified 53 industrial facilities, in addition to a number of City of Portland outfalls, that may potentially be associated with constituents" in Portland Harbor, as opposed to only 17 possible sources identified in the HRS documentation record. She encouraged EPA "to support thorough site discovery in Portland Harbor so that all sources of contamination to the Portland Harbor are identified and controlled and so that investigation and any necessary remediation costs may be spread fairly among all potentially responsible parties."

Cheryl R. Koshuta, representing the Port of Portland (hereafter the Port), also noted that there are more than 50 PRPs and suggested that, in such a large basin, there may be many more. She also offered comments on the definition of site boundaries, the use of a preliminary study to document the presence of anadromous fish in the harbor, sediment deposition and transport processes, the definition of background concentrations and the use of default risk assessment factors.

Robert A. Brunoe, General Manager, Department of Natural Resources, Confederated Tribes of the Warm Springs Reservation of Oregon (hereafter the Warm Springs Tribes), supported the listing decision but concluded "we have concerns about both the manner in which the site was proposed and the geographic scope of the listing."

Michael Farrow, Director, Department of Natural Resources, Confederated Tribes of the Umatilla Indian Reservation (CTUIR) did not support the listing if EPA was proposing to only list the sediments in Portland Harbor. The CTUIR also expressed strong concerns with bifurcating the site into in-water and upland components with responsibility being split between EPA for the in-water component and ODEQ for the upland areas. He included as an attachment to his comment a document titled *Portland Harbor Cleanup Statement of General Principles* (hereafter the *Principles*) which describes an approach in which EPA and Oregon DEQ would divide responsibilities for the site. Mr. Farrow also commented on the need for EPA to provide opportunities for participation by the Tribes that is consistent with the Tribes' treaty rights and EPA's trust responsibility to the Tribes, and expressed particular concern about the role of Natural Resource Trustees and the need for funding to permit participation by the Tribes.

Glen D. Carter wrote in opposition to the listing. He claimed that the listing is "sorely lacking in validity and substance if you take a holistic view of the harbor, the Willamette River, its basin, and the beneficial uses now served without apparent stress or identified harm." He claimed that the contamination in the harbor consisted of "minuscule concentrations of noxious substances in bottom sediment deposits," and that some of these substances occur naturally in the river basin. Mr. Carter suggested that, while migratory fish have been damaged by over-harvesting, "there are great numbers of resident fish from numerous species perpetually in the Portland Harbor." He also claimed that recreational use of the harbor is greater than ever with "no public health record of increased water-borne diseases or irritations." Mr. Carter also suggested deleterious effects of remediation, stating that capping of sediments would hinder maintenance dredging of the navigation channel and that, alternatively, hauling the sediments away may result in additional air pollution problems. Mr. Carter concluded that "housekeeping chores" can be handled on an "as needed" basis under State of Oregon rules and leadership and that a "river management program of this type would also hold down some of the horrendous costs that result from environmental "overkill."

Harry Demaray commented that the area generally known as Portland Harbor extends well upstream of the area designated as the harbor in the HRS documentation record. He also suggested that contamination in the harbor originated from areas upstream of the site, including other contaminated sites.

Randy Settler, Chair, Yakama Nation Fish and Wildlife Committee of the Confederated Tribes and Bands of the Yakama Nation (hereafter the Yakama Nation) commented that the Yakama Nation "has and continues to adamantly support EPA's decision to list the Portland Harbor site on the federal National Priorities List." He also commented, however, that "[a]lthough the site is proposed for listing on the NPL, the procedural, legal, enforcement and technical effect of bifurcating cleanup responsibilities essentially equates to a state deferral of upland sites and this is unacceptable to the Yakama Nation." Mr. Settler expressed concern "that the current proposed split-cleanup strategy jeopardizes the opportunity for tribal participation in state-led cleanup decisions for upland sites, weakens tribal government consultation efforts, prevents the cost-effective development and implementation of consistent upland and river-sediment cleanup standards that protect tribal people's health and treaty resources and may compromise the rights of natural resource trustees to bring restoration damage claims against upland facilities."

5.1.3.1 Stakeholder Roles/Participation

Numerous comments were submitted regarding the roles and participation of stakeholders in the investigation and remediation process.

Randall J. Butler, Portland District Engineer for the U.S. Army Corps of Engineers, commented that EPA's HRS evaluation "justifies further investigation" and expressed the hope that "we can work collaboratively with your agency in order to resolve the numerous and complex problems associated with the harbor sediments." Noting that the USACE has a major navigation project and flood control authority in the harbor, he again expressed his hope "to work with EPA and other stakeholders to manage these authorities in conjunction with EPA's CERCLA investigation."

The Warm Springs Tribes commented that they "have concerns about . . . the manner in which the site was proposed." Referring to "extended negotiations" between EPA and the Oregon DEQ, they objected that "the Tribes were neither invited to participate in or consulted regarding the negotiations." The Warm Springs Tribes continued, "[w]e believe EPA's decision to exclude the Tribes from the negotiations that led to segregation of the upland and in-river areas was inconsistent with EPA Region 10 internal policy on Tribal Consultation, Executive Order 13084, and EPA's trust responsibility to the Tribes. The Warm Springs Tribes would like assurance from EPA that its decision . . . will not compromise the Warm Springs Tribes' rights or limit our ability to participate in and monitor cleanup activities."

CTUIR, the Nez Perce Tribe, the Yakama Nation, and the Warm Springs Tribes all expressed strong concerns with EPA's failure to consult with them about agreeing to the *Principles* that results in "bifurcation" of the site into two discrete areas, pointing to the following provision from the *Principles:*

> The Portland Harbor Cleanup includes upland and in-water contamination. DEQ, using state cleanup authority, will have lead technical and legal responsibility for the upland contamination and for coordinating with EPA on upland contamination, which may impact in-water contamination. EPA, using federal Superfund authorities, will have lead technical and legal responsibility for in-water contamination.

The Warm Springs Tribes expressed the view that "EPA oversight [of the whole project] would result in the most thorough cleanup." They noted that, because of limited staff, separating cleanup processes reduces their ability to participate in and monitor cleanup activities.

Calling the approach to dividing responsibilities "extremely unusual," CTUIR commented that "it seeks to allow state lead of sites that should be on the NPL . . .Staff have noted that this may not even be legal." CTUIR expressed concern "about the vulnerability of ODEQ to political pressure from the state executive and legislative branches." As possible concerns it cited "a risk that the legislature could cut their funding or state law could be changed which would affect the quality of the cleanup."

CTUIR commented that their staff had met with EPA "to discuss this listing, but they could get no straight answers as to exactly what effect the splitting of authorities [between EPA and ODEQ] will do to the NRTs interests. Indeed, even the Principles of Agreement recognize that the EPA has a trust responsibility to the tribe, yet that trust responsibility does not apply to the state when it acts under its own authority under state law."

CTUIR requested that "there be a mechanism for tribal participation in all phases and elements of a coordinated clean-up." CTUIR noted that, since the listing proposal, EPA has met with the Tribes twice to discuss the ramifications of the listing, "yet EPA staff have yet to answer specific questions as to how this type of listing will effect NRT [Natural Resource Trustee] interests nor how tribal participation will be provided for in a bifurcated clean up." Referring to the *Statement of Principles*, CTUIR commented "[w]e have been unable to get a clear statement from EPA or ODEQ as to exactly what the *Principles* represent.[1] If they are the underlying principles of the ODEQ-EPA understanding of how the clean-up will progress then they are invalid because they were negotiated without the federal NRTs and without any tribal input."

Like the Warm Springs Tribes, CTUIR also commented on EPA's failure to comply with Executive Order 13084. This EO states that "EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides funds necessary to pay the direct compliance costs. . ." The EO also "requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments 'to provide meaningful and timely input in the development of regulatory policies on matters that significantly affect their communities." CTUIR concluded, "[u]ntil the tribes have funding that is not limited to a specific, state-defined, work product, the tribes will remain unfunded to define and protect their treaty reserved rights in Portland Harbor.

CTUIR quoted from the Federal Register announcing the proposal (65 FR 46131, July 27, 2000) which claimed "[t]his proposed rule does not significantly or uniquely affect the communities of Indian tribal governments because it does not significantly or uniquely affect their communities." CTUIR concluded the "circular logic in this statement is readily apparent, and just as readily wrong." They cited their continual involvement in Portland Harbor discussions without Agency funding in order to remain informed.

The Warm Springs Tribes, the Nez Perce Tribe, the Yakama Nation, and CTUIR all raised issues related to Agency trust responsibilities and the Tribes' Natural Resource Trustee status. Citing the Treaty with Walla Walla, Cayuse, etc., 1855, 12 Stat. 945, Ratified March 8, 1859, CTUIR commented that, because Willamette Falls is "one of the last remaining eel fisheries and that all pollutants within the Willamette River have come

[1]The *Portland Harbor Cleanup Statement of General Principles* was submitted as an attachment to the CTUIR comments.

into contact with salmon in the Columbia River, a treaty protected resource, the CTUIR is a Natural Resource Trustee." CTUIR noted that the *Principles* indicate that EPA will continue to maintain its trust responsibility to each tribe and that the Oregon DEQ will assist EPA in carrying out these responsibilities. But CTUIR objected that "[t]he provision that ODEQ will 'continue to provide opportunities for the tribes to participate in state-led efforts' is misleading to the extent that ODEQ made any but the most token efforts at tribal participation." CTUIR commented further that, "[t]he idea of advisory groups, particularly in this structure, limits the effectiveness of tribal consultation. The Stakeholder Advisory Group includes environmental organizations and community groups, without any reference to how these groups will be chosen. To lump tribes together with vague 'community groups' is to ignore the treaty protected interests of the tribes and reduce their input to that of mere 'interested parties.'"

CTUIR concluded by stating that, if the site is to be listed as proposed by EPA Region 10, several things must be accomplished:

1. The site must be listed in its entirety, including all upland and in-water contamination.
2. A proposal from EPA regarding how they will be able to meet the trust responsibility owed the tribe and a specific plan to consult with the tribes.
3. A draft agreement which EPA intends to enter with DEQ to provide guidance for clean-up responsibilities.
4. There must be an agreement or plan of EPA and ODEQ with the tribes in order to provide funding for tribal participation.

The Yakama Nation commented that "[a]lthough the site is proposed for listing on the NPL, the procedural, legal, enforcement and technical effect of bifurcating cleanup responsibilities essentially equates to a state deferral of upland sites and this is unacceptable to the Yakama Nation." Mr. Settler expressed concern "that the current proposed split-cleanup strategy jeopardizes the opportunity for tribal participation in state-led cleanup decisions for upland sites, weakens tribal government consultation efforts, prevents the cost-effective development and implementation of consistent upland and river-sediment cleanup standards that protect tribal people's health and treaty resources and may compromise the rights of natural resource trustees to bring restoration damage claims against upland facilities."

In response, the Agency acknowledges that commenters have raised significant issues regarding the need for EPA to meet its trust responsibilities to the Tribes so as to facilitate their meaningful participation in the site investigation and remediation process, and to protect Tribal treaty rights. It is important to note that the fundamental purpose of this Final Rule is to place this site on the NPL. On that point specifically, the HRS evaluation documents the presence of Level II contamination of a fishery and environmental targets in Portland Harbor resulting in a surface water pathway score of 100.00 and a site score of 50.00, well above the score of 28.50 required for listing. No specific HRS rating factor values were questioned by any commenter other than hazardous waste quantity, as discussed in Section 5.1.3.6 of this support document. This Rule is merely the first step in a process leading to development of an RI/FS and ultimate remediation, if required, of a site. Stakeholder roles and responsibilities and preservation of Tribes rights consistent with the Agency's trust responsibilities are issues that continue to be discussed with the Tribes. EPA's goal is for the Tribes to participate in both the in-water and the upland work in a manner consistent with EPA's trust responsibilities, and the participation of the Tribes will be clarified and addressed after the site is added to the NPL.

Concerning the Agency's proposal and decision to add the site to the NPL, the Agency believes that it has acted consistent with its trust responsibilities to the Tribes by fully consulting with the Tribes. The Agency has communicated directly with the leaders of the Tribal governments to seek their views and concerns, and has met with the leaders and staff of the Tribes a number of times prior to the proposal and prior to this final

rule. EPA recognizes that the Tribes have treaty protected rights and resources which may be impacted by the site, and the Agency is committed to fulfilling its responsibilities to consult with the Tribes on a government-to-government basis.

EPA acknowledges that it did not involve the Tribes directly in the discussions with the State of Oregon in the development of the *Principles*. In that respect, EPA may have fallen short of its goals for fully consulting with the Tribes in all aspects of EPA's activities at the site. However, EPA does not consider the *Principles* as making any substantive decisions on the nature of the site listing or on the level of cleanup that will be accomplished at the site. As discussed below in section 5.1.3.3, EPA is not limiting the extent of the site being added to the NPL to the in-water sediments. Neither the *Principles* nor the site listing affect the areal extent of the NPL site for purposes of remedial action or for natural resource damages, and CERCLA authorities will continue to be available to address upland sources of contamination, as appropriate. While the State of Oregon concurred with the addition of the Portland Harbor site to the NPL, it was reluctant to relinquish major responsibility in addressing a site for which the degree and extent of contamination, as well as original sources of the contamination, are as yet unknown. The *Principles* recognize the complexity of the issues at the site and ensure that the State of Oregon will continue to have a significant and meaningful role in addressing these issues. The *Principles* address only EPA's co-management of the Site with the State, and do not in any way limit EPA's trust responsibility to the Tribes or EPA's commitment to consult fully with the Tribes regarding the Site.

EPA does not agree that assigning lead responsibilities for all or part of a Superfund site cleanup is unusual. EPA's National Contingency Plan at 40 C.F.R. Part 300 and cooperative agreement regulations at 40 C.F.R. Part 35 specifically provide that a state may be the lead agency at an NPL site. EPA Region 10 has experience with such a relationship at a number of NPL sites. For example, the Commencement Bay site in Tacoma, Washington, has been jointly administered by EPA and the State of Washington's Department of Ecology (WDOE). The agencies have shared responsibilities for site cleanup, with WDOE the lead for upland source control and EPA the lead for addressing in-water sediment contamination. The *Principles* makes clear that EPA will remain closely involved with the upland cleanup work led by ODEQ to ensure the control of upland sources that may impact in-water contamination.

However, EPA notes that the *Principles* document does not establish a legal requirement on EPA, and the document does not legally bind EPA to any particular course of action. Neither does the document represent a deferral of responsibility for the site to the State as that term is used in EPA's *Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions*, OSWER Directive 9375.6-11. EPA's deferral policy specifies that a number of requirements be met before a deferral can be granted. Perhaps the two most significant requirements in the present case are that "a site may not be deferred if the affected community has significant, valid objections," and that "viable and cooperative PRPs will agree to pay for and conduct response actions." As responsible parties for upland facilities that may be contributing to the contamination in Portland Harbor have not yet been identified, a deferral would not be appropriate at the Portland Harbor site. Rather, the *Principles* were agreed on by EPA and ODEQ as a way of articulating how the agencies plan to manage this Superfund site under both CERCLA and Oregon law. If ODEQ is unable to meet its commitments in the *Principles*, EPA will reevaluate the site management agreement.

The precise roles of all involved parties, including the USACE, the Tribes, and the Natural Resource Trustees, will be further defined after the site is added to the NPL. The *Principles* specifically anticipates that EPA and ODEQ will establish additional agreements on roles and responsibilities:

> "The specific roles and responsibilities for each agency will be set out in a Memorandum of Agreement that will establish a decision framework process for areas in which EPA and DEQ have joint responsibility."

As recognized by the commenting Tribes, the *Statement of Principles* includes a pledge by EPA to meet its trust responsibilities to the Tribes, and by ODEQ to provide opportunities for the Tribes to participate in efforts led by the State. EPA and ODEQ are in the process of discussing with the Tribes the negotiation of agreements that will describe how the agencies and the Tribes will work together to ensure their full participation in the investigations of both sediments and upland sources, and to establish a process so that the Tribes are consulted on decisions regarding what cleanups are needed and the nature of remedial actions. EPA expects the agreements to provide mechanisms that will allow the Tribes to participate in both the in-water and the upland work in a manner consistent with EPA's trust responsibilities. EPA recognizes that it will continue to have a trust responsibility to the Tribes for all activities at the site, and will consult government-to-government with the Tribes about EPA decisions on ODEQ-led investigations and cleanups. One of EPA's goals is to ensure that the agreements will provide for the Tribes to participate in the ODEQ-led cleanups in a manner that will provide a level of participation that would be offered by EPA. As part of these discussions, EPA has provided the Tribes with information on how the Tribes can apply to EPA for financial assistance in the form of Superfund cooperative agreements to support their participation. EPA is committed to taking all actions appropriate to fulfill its trust responsibility to the Tribes and to protect Tribal rights and resources.

With regard to compliance with Executive Order 13084, EPA agrees that the discussion of this EO in the preamble to the proposal inadequately characterized the applicability of the EO to this decision. Under section 3(b) of Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian Tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the Tribal governments, or EPA consults with those governments. In this case, the addition of the site to the NPL will not impose any substantial direct compliance costs on the Tribes. While the Tribes may incur costs from participating in the investigations and cleanup decisions, those costs are not compliance costs. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

However, as noted above, EPA recognizes that it has a trust responsibility towards the Tribes, who have treaty protected resources that may be impacted by site cleanup decisions. As part of administering the site and overseeing the investigations and cleanups, EPA intends to provide for the direct participation of the Tribes so that the Tribal governments and their elected leaders can provide meaningful and timely input in investigation and cleanup decisions by both EPA and ODEQ. As part of these arrangements with the Tribes, the EPA and ODEQ intend to ensure that adequate funding is made available to support the participation of the Tribes.

5.1.3.2 Site Should be Addressed by State/Local Effort

Mr. Carter commented that "EPA has developed a data analysis of a local matter that can and will be managed, if proven necessary, at the state and local level." Stating that because the river is "functioning satisfactorily under present conditions. . . . [n]ecessary 'housekeeping chores' can be handled on an 'as needed' basis under State of Oregon rules and leadership. He concluded that "[a] river management program of this type would also hold down some of the horrendous costs that result from environmental 'overkill.'"

In response, EPA believes that the possibility of State action does not warrant failing to list this site. First, the State supports listing. EPA has received a letter (available in the docket at the time of proposal) from Oregon Governor Kitzhaber announcing his support for listing. Second, it is not clear that there are parties willing and able to conduct or pay for cleanup necessary at this site. Thus, NPL listing and the consequent availability of fund money for remedial action are important.

Regarding the commenter's concern for "horrendous costs" and "environmental overkill," the Agency has evaluated the Portland Harbor site using the HRS and found the site to warrant placement on the NPL due to the presence of elevated concentrations of numerous CERCLA hazardous substances (some highly elevated) in an area of human food chain and sensitive environmental targets. The need for remedial response and the possible costs of such response will be the subject of future investigations.

5.1.3.3 Extent of Site

The Warm Springs Tribes and the Port questioned the Agency's description of the site. The Port quoted from an EPA memorandum, *Clarification of NPL Listing Policy*:

> National Priorities List does not describe releases in precise geographical terms; it would be neither feasible nor consistent with the limited purpose of the NPL (as the mere identification of releases), for it to do so. . . EPA regulations provide that the nature and extent of the threat posed by a release will be determined by an RI/FS as more information is developed on site contamination (40 CFR 300.68(d)).

The Port stated that, "[i]n contrast, the HRS Documentation Record indicates that the 'site consists of contaminated sediments from River Mile 3.5 to River Mile 9.2 of the Willamette River in Oregon." Noting that this identification places the most upstream point of contamination at River Mile 9.2 (thus making this point the beginning of the HRS 15-mile target distance limit), the Port commented that "[t]hese descriptions are precise geographical terms," contrary to Agency guidance. The Port commented that "it is premature to conclude that the contamination is located between River Mile (RM) 3.5 and RM 9.2."]

In a May 26, 1999 letter presenting comments on the draft Portland Harbor Sediment Management Plan (submitted and incorporated as an attachment to the comments of the Yakama Nation), the Columbia River Inter-Tidal Fish Commission (CRITFC) suggested that the geographic scope of the site assessment and potential cleanup be expanded "to include upstream areas, including at least Willamette Falls and areas downstream of Harbor facilities, including the lower portions of the Willamette River, and the Columbia River. CRITFC continued, "[a]dditional sediment analysis should be obtained from the Columbia River at areas upstream of the confluence [with the Willamette River] and downstream to the estuary and immediate portions of the pacific Ocean.

Harry M. Demaray also took issue with the limited area identified as the site in the HRS documentation record as proposed. He expressed the belief that "much of the sedimentary pollution you refer to in your 'Portland Harbor' NPL Report originated far upstream in the downtown Portland Harbor." Mr. Demaray continued, "[t]he Portland Harbor site includes all of the Willamette River from your 'six-mile stretch' upstream to at least the Ross Island Bridge [at approximately River Mile 14] including the infamous Zidell site.

The Port and Time Oil both objected to the reference to "up to 17 industrial operations" with potential responsibility for contamination in Portland Harbor on page 1 of the HRS documentation record as proposed. Both commenters noted that the Oregon Department of Environmental Quality has identified more than 50 industrial facilities and a number of City of Portland outfalls that "may potentially be associated with constituents identified in Portland Harbor." The Port concluded that "a full evaluation of PRPs should be completed during the RI/FS."

As noted above in Section 5.1.3.1, *Stakeholder Roles/Participation*, the CTUIR submitted a document titled *Portland Harbor Cleanup Statement of General Principles*. CTUIR, the Nez Perce Tribe, the Yakama Nation, and the Warm Springs Tribes all objected to what they felt was a "bifurcation" of the site into two discrete areas. The Tribes were concerned that the site listing, read together with the *Principles*, means that

the site listed on the NPL will include only in-water contamination. The Tribes expressed concern that 'segregating the upland sources from the NPL site could compromise the Tribes' ability to bring claims for natural resource damages." Finally, they commented that "it makes little sense from a cleanup perspective to draw a jurisdictional line between the in-river sediments and the adjacent uplands sources."

CTUIR commented further that "[i]n the listing documents it is noted that because the specific upland sources are not known, the listing would only be of the sediments. I submit that we are dealing with one unified site and that this site can not be divided up between state and federal authorities. Such a course of action would be completely infeasible, both legally and technically." CTUIR suggested that the rationale of the HRS evaluation being based on the sediments "is being used to justify looking only at the sediments and leaving the upland source identification to the state. This is not how Superfund sites are or should be designated." CTUIR concluded, "[a]t this time, CTUIR can not support the Region 10 proposal to only list the sediments in Portland Harbor. . . The site must be listed in its entirety, including all upland and in-water contamination."

In response, the site EPA is adding to the NPL is not limited to the in-water contamination. Placing a site on the NPL is based on an evaluation, in accordance with the HRS (40 CFR Part 300, Appendix A), of a release or threatened release of hazardous substances, pollutants, or contaminants. However, the fact that EPA initially identifies and lists the release based on a review of contamination at a certain parcel of property does not necessarily mean that the site boundaries are limited to that parcel.

EPA identified the site in the HRS documentation record based on the analytical data available at the time of proposal. As noted above in section 5.1.3.1, because potential sources of contamination to this river segment have not been investigated to the extent necessary to be identified as sources, the site evaluation on which the listing is based is limited to releases found in contaminated sediments of the surface waters, with no specific sources identified. However, that evaluation for HRS purposes does not limit the extent of the site that is added to the NPL, which includes upland areas that are found to be sources of contamination. Site definition is discussed in Section I-F of the Preamble to the proposal to add the Portland Harbor site to the NPL (65 FR 46131 (July 27, 2000)).

The Preamble states:

> When a site is listed, the approach generally used to describe the relevant release(s) is to delineate a geographical area (usually the area within an installation or plant boundaries) and identify the site by reference to that area. As a legal matter, the site is not coextensive with that area, and the boundaries of the installation or plant are not "boundaries" of the site. Rather, the site consists of all contaminated areas within the area used to identify the site, as well as any other location to which contamination from that area has come to be located, **or from which that contamination came**. [emphasis added]

Regarding the objections of the Port and Time Oil to the reference to "up to 17 industrial operations" potentially associated with the site, and as noted by several other commenters, the Oregon DEQ has identified numerous potential sources of the contamination in Portland Harbor. At the time of listing, however, none of these sources has been sufficiently investigated to link them with the sediment contamination. In Section 1.1, *Definitions*, the HRS defines "source" as:

> Any area where a hazardous substance has been deposited, stored, disposed, or placed, plus those soils that have become contaminated from migration of a hazardous substance. Sources do not include those volumes of air, ground water, surface water, or surface water sediments that have become contaminated by migration, except: in the case of either a ground water plume with no identified source or contaminated surface water sediments with no identified source, the plume or contaminated sediments may be considered a source.

Frequently, in a complex environment such as Portland Harbor, it is not possible to establish the original source(s) of contamination within the limited scope of a screening tool. In such cases, the HRS specifically allows the listing of contaminated sediments so that a more detailed investigation can be commenced. It is in this RI/FS stage of the investigation process that the linkage of the sediments to specific originating sources can be accomplished.

While the Warm Springs Tribes and CTUIR have raised significant issues regarding the *Portland Harbor Statement of General Principles*, the Agency does not consider these comments to be an impediment to promulgating the site as proposed, given the above discussion of site definition. As more information is developed, the Agency will continue to work with the Oregon DEQ, the Tribes, and other stakeholders, including the commenters, to define the specific roles and responsibilities appropriate to each.

5.1.3.4 Risk Posed by Portland Harbor

Mr. Glen Carter commented that, while it "may seem logical, proper, and necessary [to list the site] to people who sit in distant offices and make far reaching decisions based on computer data and read-out charts[,] . . . it is sorely lacking in validity and substance if you take a holistic view of the harbor, the Willamette River, its basin, and the beneficial uses now served without apparent stress of identified harm." He claimed that "nowhere has there been shown any harm to these uses because of minuscule concentrations of noxious substances in bottom sediment deposits." He also commented that "metals are listed as toxicants, but the EPA fails to recognize that some of them occur naturally in the river basin."

Mr. Carter commented that "Portland is one of the few major harbors in the world which operates in harmony with other non-port uses." He claimed that "[t]here have been no identified impediments to migrating fishes, either adults or young, since 1969 when low dissolved oxygen concentrations plagued them during late summer." He indicated that this problem had been corrected "long ago" by local effort.

Mr. Carter expressed the view that migratory fish have been "decimated by 'over-harvesting.'" He claimed, however, that "there are great numbers of resident fish from numerous species perpetually in the Portland Harbor. They neither require management nor do they receive much recreational attention. Their presence certainly must be given recognition in any harbor evaluation."

Mr. Carter commented that "[r]ecreational use of the harbor, including water contact users, is now greater than it has ever been. . .[y]et, there is no public health record of increased water borne diseases or irritations." He pointed out that river users are cautioned against drinking untreated river water, but claimed "[t]his would be true for any river, anywhere."

The Warm Springs Tribes expressed concern that contamination in Portland Harbor could affect fish runs in the Columbia River. They commented that, because "tribal members consume higher than average proportions of Willamette River and Columbia River fish, we are concerned not only about how cleanup decisions will affect fish habitat, but also about how cleanup decisions could affect human health" and cultural resources. The Nez Perce Tribal Executive Committee also expressed concern that cleanup be "fully protective of human health," including consideration of fish consumption and "traditional use of the lower Willamette River."

As noted above in Section 5.1.3.3 of this support document, *Extent of Site*, the Yakama Nation submitted with its comments a correspondence from Donald Sampson, Director, Columbia River Inter-Tidal Fish Commission (CRITFC), presenting that organization's comments on the ODEQ *Draft Portland Harbor Sediment Management Plan*, May 26, 1999. This document stresses that "CRITFC tribes are ceremonial, subsistence and commercial fishers who consume significantly more fish than the average individual.

Exposure to toxic chemicals from consuming contaminated fish is of specific concern to the Columbia River tribes, their environments and the health and welfare of tribal members."

The Port of Portland cited a statement on page 47 of the HRS documentation record as proposed, "[t]he Lower Reach of the Willamette River to Willamette Falls provides . . . juvenile rearing habitat for several anadromous fish species." The Port commented that this statement raises two concerns. It objected that the report on which the statement was based was the *Preliminary Natural Resource Survey* which "by its nature is incomplete." The Port also stated that the statement was not properly caveated in the HRS documentation record. It noted that certain conclusions of the report were admitted to be only "probable."

The Port commented that, while the method of establishing background and the use of default values for establishing toxicity, persistence, and bioaccumulation threat may be appropriate in applying the HRS, these procedures are not consistent with EPA risk assessment guidance. It recommended that "the Work Plan for the RI/FS define the risk assessment process that will be used to select the actual risk assessment parameters." The Port also commented that there was no support for the statement in the HRS documentation record (page 1) that '[t]he river segment between RM 2 [sic] and RM 10 is the primary depositional area of the Willamette River System." It concluded "the Port supports the adequate study of the sedimentation process in the RI/FS."

In response to concerns raised by the Port of Portland, the Yakama Nation, and the Warm Springs and Nez Perce Tribes, EPA is placing the Portland Harbor site on the NPL because the Agency shares these concerns. Adding the site to the NPL will allow the Agency to study the site more fully during the RI/FS stage of the investigation and conduct a risk assessment to more accurately determine the risk posed by the site to human health, including risks posed by the consumption of fish. Precise risk parameters to be incorporated in the risk assessment process will be determined as that stage of the investigation becomes better defined.

Regarding Mr. Carter's concerns, and as documented in Tables 1 through 19 of the HRS documentation record, the substances found in the observed releases by chemical analysis as indicated by the Portland Harbor SI analytical results include: acenaphthene, benzo(a)pyrene, cadmium, carbazole, copper, DDT, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, lead, mercury, 2-methyl naphthalene, 4-methylphenol, naphthalene, silver, PCBs, TBT, and zinc. It should be noted that many of these contaminants are present at concentrations many orders of magnitude above background levels as opposed to the "minuscule concentrations" suggested by Mr. Carter. These contaminants are posing a threat to both human food chain targets and sensitive environments as described in Sections 4.1.3.3 and 4.1.4.3 of the HRS documentation record as proposed (*Human Food Chain Threat - Targets* and *Environmental Threat - Targets*, respectively).

The HRS is a screening tool for placing sites on the NPL; the NPL is used to identify for the states and the public those sites that appear to warrant remedial action and require further investigation. Placing a site on the NPL is not the final stage of site assessment activity. Until the site investigation process has been completed, EPA can neither estimate the full extent of contamination at the site nor describe the appropriate remedial response, if any. At the Portland Harbor site, an important part of future investigations will be to identify the source or sources of the observed contaminants.

EPA will fully consider the extent of any impacts on human health and on fish before deciding what, if any, response actions are warranted at this site.

Regarding the Port's concern about the preliminary nature of Reference 11, cited on page 47 of the HRS documentation record at proposal, *Findings of Fact, Preliminary Natural Resources Survey, Lower Willamette River, Portland, Oregon*, prepared by NOAA, this section of the HRS documentation record discusses the hazardous substance migration path for contaminants in the surface water pathway. As the

site consists of contaminated surface water sediments, the questioned information was presented only for informational purposes. The more critical points for HRS scoring purposes are demonstrated by multiple references. The presence of a Level II fishery discussed on page 59 of the HRS documentation record as proposed, for example, is also documented by Reference 14, *Willamette River Spring Chinook Salmon run, Fisheries, and Passage at Willamette Falls*, prepared by the Oregon Department of Fish and Wildlife. EPA considers the critical components of the site score at the Portland Harbor site to be well documented by the references cited in the HRS documentation record at the time of proposal.

5.1.3.5 Harmful Effects of Remediation

Mr. Carter asked what EPA intended to do with contaminated sediments. He commented that these sediments "cannot be covered or capped in place at the river bottom and still comply with river disposal regulations." He stated also that such an action would hinder maintenance dredging of the navigational channel, and that "the role of natural forces in winter floods will make it difficult to manage caps in the river channel as water accretes and erodes the bed and shorelines." Finally, Mr. Carter commented that hauling the sediments to some distant location merely transfers the problem to a new site and may increase the likelihood of air pollution problems.

In the attachment to the comments from the Yakama Nation (from the Columbia River Inter-Tidal Fish Commission (CRITFC)), CRITFC also expressed concern that sediments not "be disposed of in such a way that those sediments will re-enter the aquatic environment nor should they be 're-cycled' into other land or industrial uses." Stating that "CRITFC supports a 'no acceptable risk' and 'zero emission' policy on bioaccumulative, persistent toxic substances, especially into fish bearing waters," CRITFC called specifically for management options "that do not included dredging."

In response, EPA considers it premature to speculate as to what the appropriate remedial response might be at the Portland Harbor site. As noted above, placing the site on the NPL is not the final stage of site assessment activity. Only after the completion of the remedial investigation/feasibility study (RI/FS) and the associated risk assessment will the Agency be able to better suggest possible remedies. EPA will fully consider the effectiveness, cost, and feasibility of possible response actions such as capping and dredging of sediments, before deciding what, if any response actions are appropriate. Even during remediation, EPA may find that the contamination is more widespread than previously estimated and the site boundaries may be correspondingly expanded. And again, as noted above, an important objective of future investigations of the Portland Harbor site will be to identify potential sources of the observed contamination. Certainly, EPA will make every effort to minimize environmental damage, both during future investigations and during subsequent remedial response, if any.

5.1.3.6 Hazardous Waste Quantity

CTUIR cited what it called a "glaring error" in the calculation of hazardous waste quantity on page 44 of the HRS documentation record as proposed. They commented that the Agency's statement that 10 centimeters is equal to 0.39 inches or 0.08 feet is incorrect. They stated that the correct equivalent of 10 centimeters is 3.937 inches or 0.32 feet. CTUIR commented that the number of cubic yards to be used in the determination of hazardous waste quantity, based on the corrected values, was 3,566.93 rather than 892 as calculated in the HRS documentation record at proposal. They claimed that such an error "casts doubt upon the reliability

of the entire report." CTUIR also commented that the assumed depth of contaminated sediments of 10 centimeters could not be supported until all of the sediments were tested and that the assumed width of the contaminated sediments of 10 feet is "a vast understatement of the potential contamination that exists within Portland Harbor."

In response, the Agency concedes the error in the conversion of contaminated sediment depth from centimeters to feet for purposes of applying the hazardous waste quantity equation on page 44 of the HRS documentation record and has corrected the error. Correction of this error, however, has no bearing on the assigned hazardous waste quantity value of 100. As indicated in Table 2-6 of the HRS, *Hazardous Waste Quantity Factor Values*, the original quantity value of 892 and the corrected value of 3,566.93 both fall within the range between 100 and 10,000 receiving an assigned factor value of 100.

Regarding CTUIRs' concern for the "reliability of the entire report," CTUIR provided no other examples of errors in the HRS evaluation of the Portland Harbor site, either specifically or by implication. EPA considers the data used to be reliable and validated by appropriate quality control procedures. Countless samples were gathered by the USACE, EPA and the State using appropriate techniques, and the values obtained were consistent throughout several rounds of sampling. Thus, EPA does not believe that one error in failing to convert centimeters to inches negates other any other aspect of the HRS documentation record.

5.1.4 Conclusion

The original HRS score for this site was 50.00. Based on the above response to comments, the score remains unchanged. The final scores for the Portland Harbor site are:

Ground Water:	Not Scored
Surface Water:	100.00
Soil Exposure:	Not Scored
Air:	Not Scored
HRS Score:	50.00